UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,680	01/21/2004	Osamu Kobayashi	GENSP047	5247

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EXAMINER
SHAIFER HARRIMAN, DANT B

ART UNIT	PAPER NUMBER
2134	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- . Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after t he mailing date of this communication, even if timely filed, may reduce any· earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _05 November 2007_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1 - 16 & 18 - 20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1 - 16 & 18 - 20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _21 January 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received·in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _See Continuation Sheet_.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :12/18/2007, 11/07/2007, 11/05/2007, 08/16/2007, 1/03/2007, 10/25/2006.

DETAILED ACTION

Response to Amendment

- Claim # 17 is cancelled.

- Claims 1, 3, 4, 5, 6, 7, 10, 11, 12, 14, 15, 16, 18, 19, 20 are amended.

- Claims 2, 8, 9, 13 are original.

- The claim objection made on claim 15 is withdrawn, due to the applicant's correction.

- The 35 U.S.C 112 2nd paragraph on claims 15 & 20 is withdrawn, due to the applicants correction.

Response to Arguments

Applicant states: "*The Applicants have thoroughly reviewed the cited reference and have failed to find any teaching or suggestion of multiple encryption keys and therefore, the Applicants believe that the limitations of claim 17 that have been amended to claim 1 now pending are not taught by the reference and are therefore allowable renders claim 1 allowable.*"

- Examiner respectfully disagrees, of the reference Huuhtanen (Publication # EP 0 674 441 A1), in Col. 6, lines 24 – 35 & Col. 6, lines 49 – 55 & Col. 7, lines 33 – 37, all teach multiple decryption keys, which implies that their are multiple encryption keys.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim(s) 1, 6, 7, 12, 18 are rejected under 35 U.S.C. 102(b) as being taught by Huuhtanen

(Publication # EP 0 674 441 A1)

Huuhtanen teaches:

Claim #1. A packet based high bandwidth copy protection method
comprising:

- forming a number of data packets at a source device (Col. 3, lines 35 – 41 & Col. 3, lines

  47 – 50, the examiner notes that the source device is the TV operators equipment, the

  operators signal to the digital cable box that the customer receives is both scrambled

  (encrypted) and unscrambled signals or data packets that is for TV programming service

  operation.);

- forming a first group of encrypted data packets by encrypting some of the data packets

  based upon a first set of encryption/decryption values, wherein the number of encrypted

  data packets in the first group of encrypted data packets is less than the number of data

  packets formed at the source device;(Col. 3, lines 47 – 50, the examiner notes that by

sending both scrambled and unscrambled data packets to the customer, this means that a

selected or specific group of packets from the many packets that were formed at the

source device was chosen for encryption, this will show that the number of scrambled

data packets chosen form a large group will be smaller than the overall number of data

packets that were formed at the source device.)

- forming at least a second group of encrypted data packets by encrypting those data

   packets not already encrypted based upon a second set of encryption values (Col. 6, lines

   24 – 35 & Col. 6, lines 49 – 55 & Col. 7, lines 33 – 37, the examiner notes that their are

   multiple encryption and decryption keys used to encrypt/decrypt the variable length data

   packets that form the image of the video and audio signal that is being sent to the sink

   device); and

- transmitting the encrypted and unencrypted data packets from the source device to a sink

   device coupled thereto(Col. 3, lines 47 – 50);

- decrypting the first group of encrypted data packets using the first set of

   encryption/decryption values(Col 3, lines 5 –10, the examiner notes that the customer has

   a descrambling device attached the signal receiver or sink device.); and

- decrypting the second group of encrypted data packets using the second set of encryption

   values concurrently with the decrypting of the first set of encrypted data packets (Col. 6,

   lines 24 – 35 & Col. 6, lines 49 – 55 & Col. 7, lines 33 – 37, the examiner notes that their

are multiple encryption and decryption keys used to encrypt/decrypt the variable length

data packets that form the image of the video and audio signal that is being sent to the

sink device); and

- displaying the decrypted and unencrypted data packets by the sink device(Col 3, lines 5 –

  10, the examiner notes that the customer has a descrambling device that is attached to the

  signal receiver or sink unit, that will allow the customer to view the displayed decrypted

  data packets)

Claim #6. A system for providing high bandwidth copy protection in
a packet based system, comprising:

- a source unit arranged to provide a number of data packets (Col. 3, lines 35 – 41 & Col.

  3, lines 47 – 50, the examiner notes that the source device is the TV operators equipment,

  the operators signal to the digital cable box that the customer receives is both scrambled

  (encrypted) and unscrambled signals or data packets that is for TV programming service

  operation.);

- a sink unit coupled to the source unit arranged to receive the data packets from the source

  unit(Col 3, lines 5 –10, the examiner notes that the customer has a descrambling device

  attached the signal receiver or sink unit.);

- an encryption unit coupled to the source unit arranged to encrypt selected ones of the data packets sent from the source unit to the sink unit using a first set of encryption values and the remaining data packets using at least a second set of encryption values different from the first set of encryption values (Col. 6, lines 24 – 35 & Col. 6, lines 49 – 55 & Col. 7, lines 33 – 37, the examiner notes that their are multiple encryption and decryption keys used to encrypt/decrypt the variable length data packets that form the image of the video and audio signal) also, (Col 3, lines 5 –10   & Col. 3, lines 47 – 50, the examiner notes that the cable service operator encrypts the signal before the signal is transmitted to the customers receiver, which conveys that there is a encrypting device attached to the source or transmitter or the cable TV operators equipment, furthermore the customer has a descrambling device attached the signal receiver for the decryption of the signals or data packets that are incoming to the customers receiver.);

- a decryption unit coupled to the sink unit arranged to appropriately decrypt the encrypted data packets(Col 3, lines 5 –10, the examiner notes that the customer has a descrambling device attached the signal receiver or sink unit.);

- an encryption/decryption values generator arranged to provide the first and at least the second set of encryption/decryption values to the decryption unit (Col. 6, lines 24 – 35 & Col. 6, lines 49 – 55 & Col. 7, lines 33 – 37); and a processor for processing the decrypted data packets for display by the sink unit (Col 3, lines 5 –10, the examiner notes

that the customer has a descrambling device attached the signal receiver or sink unit that

will posses the necessary decryption values generator that will arrange for the decrypting

of the selected encrypted data packets received by the sink device, so that the customer

will be able to view the displayed video content.)

Claim #7. A system as recited in claim 6, wherein:

- the source unit is a video source(Col 3, lines 5 –10, the examiner notes that the source

  device is the TV operators equipment)

and wherein

- the sink device is a video display (Col 3, lines 5 –10, the examiner notes that the

  customer has a descrambling device attached the signal receiver or sink device, the

  receiver will undoubtedly be a set a top box attached to a television, due to the fact the

  operators service is a signal for paid subscribes to watch cable television.)

and wherein:

- the number of data packets include some audio data packets and some video data packets

  (Col. 3, lines 35-41 & Col 3, lines 5 –10, the examiner notes that the service operator has

  the transmitter or source device, and the customer has the set up top box, which is a

  receiver or sink device, the examiner further notes that "picture and sound quality," are a

  strong indication that the data packets consists of both video and sound content or data

packets.)

Claim #12. Computer program product executable by a processor for providing a packet based high bandwidth copy protection, the computer program product comprising:

- computer code for forming a number of data packets at a source device (Col. 3, lines 5 – 9 & Col. 3, lines 47 – 50, the examiner notes that the customers receiver (i.e. cable box) can be considered a computer program product. Based on the fact that a cable box has both a hardware and software components, without hardware or software component, the other component will be unable to operate; the cable box contains the necessary software to request and retrieve TV programming (i.e. movies, sporting events etc.) from the operators server (forming a number of data packets at the operators server.), moreover the operators receiver or cable box contains the software necessary to implement the goods and services promised by the operator, which is through the execution of the operators server, which contains the operators multimedia, processor.)

- computer code for encrypting a first group of the data packets based upon a first of encryption values (Col. 3, lines 5 – 9 & Col. 3, lines 47 – 50, the examiner notes that the customers receiver (i.e. cable box) can be considered a computer program product. Based on the fact that a cable box has both a hardware and software components, without hardware or software component, the other will be unable to operate; the cable box contains the necessary software to request and retrieve TV programming (i.e. movies, sporting events etc.) from the operators server (forming a number of data packets at the

operators server.), moreover the operator receiver or cable box contains the software

necessary to implement the goods and services promised by the operator, which is

through the execution of the operators server (which contains the operators multimedia

content processor.) The customers receiver will also have the necessary software for

encryption/decryption generator for sending encrypted messages (i.e. cable box

malfunction indications that facilitates problem solving and better customer service, for

example sending multimedia data packets back to the operators server (i.e. if there is a an

error in the sending of multimedia content, the receiver will request that a particular data

packet be sent back to the receiver in order to complete the multimedia content

transmission to the customer and will be encrypted so that a hacker cannot gain

information on how to break into a the cable TV system.)

wherein:

- the number of encrypted data packets in the first group is less than the number of data

  packets formed at the source device(Col. 3, lines 47 –50, the examiner notes that many

  data packets are formed at the operators source device and only a selected few of that

  many data packets at the source are chosen to be encrypted, furthermore the examiner

  interprets the selected few of the data packets that are to be encrypted as the first group.);

- computer code for forming a second group of encrypted data packets by encrypting those

  data packets not already encrypted based upon a second set of encryption values (Col. 6,

  lines 24 – 35 & Col. 6, lines 49 – 55 & Col. 7, lines 33 – 37, the examiner notes that their

are multiple encryption and decryption keys used to encrypt/decrypt the variable length

data packets that form the image of the video and audio signal that is sent to the sink

device);

- computer code for transmitting the encrypted data packets and the unencrypted data

  packets from the source device to a sink device coupled thereto(Col. 3, lines 5 – 9, the

  examiner notes that the customers receiver(i.e. cable box) can be considered a computer

  program product. Based on the fact that a cable box has both a hardware and software

  components, without hardware or software component, the other will be unable to

  operate; the cable box contains the necessary software to request and retrieve (i.e.

  transmitting/receiving) TV programming (i.e. movies, sporting events etc.) from the

  operators server (forming a number of data packets at the operators server.), moreover the

  operators receiver or cable box contains the software necessary to implement the goods

  and services promised by the operator, which is through the execution of the operators

  server (which contains the operators multimedia processor.);

- computer code for decrypting the encrypted data packets based in part upon the

  encryption values (Col. 3, lines 5-9, the examiner notes that the cable box or the operators

  cable box will have the necessary software or decryption software or a module that is

  attached or is in communication with the cable box receiver that allows the decryption of

  the incoming encrypted data packets, due to the fact the data packets and as well as the

encryption key sent from the operators server will be encrypted.);

- computer code for <u>displaying</u> the decrypted data packets by the sink device (Col. 3, lines 5-9, the examiner notes that the cable box or the operators cable box will have the necessary software or decryption software or a module that is attached or is in communication with the cable box receiver that allows the decryption of the incoming encrypted data packets, due to the fact the data packets and also encryption key from the operators server will be encrypted, which is needed in order for the display of the decrypted data packets); and

- computer readable medium for storing the computer code (Col. 3, lines 5 – 9 & Col. 3, lines 47 – 50, the examiner notes that the customers receiver(i.e. cable box, which is portable) can be considered a computer program product. Based on the fact that a cable box has both a hardware and software components, without the hardware component or software component, the other component will be unable to operate; the cable box contains the necessary software to retrieve TV programming (i.e. movies, sporting events etc.) from the operators server, which is a computer, which is able to communicate and or read the signals from the cable box, initiated by the customer or user commands, the receiver is also able to interpret the operators server commands.)

Claim #18. A method as recited in claim 17, wherein

- the first set of encryption values is different than the second set of encryption values (Col. 3, lines 47 –50, the examiner notes that if a customer requests a movie or other TV programming, a forming of the multimedia data packet content (i.e. movie) will occur at the service operator (i.e. the source) the data packets will be sent in groups in a consecutive order (i.e. first group of encrypted data packets, and second group of encrypted data packets etc.) and each group of data packets are encrypted with different keys in order to prevent a hacker from copying or obtaining the multimedia content as a whole, once only one of the groups of data packets are compromised. Also, if a customer orders another movie (i.e. multimedia content) this is also considered a second group of a forming of data packets and encryption values.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim(s) 3 & 4, 14, 15 & 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Huuhtanen (Publication # EP 0 674 441 A1) in view of Pasqualino (PGPUB # 2002/0163598)

Huuhtanen discloses

- forming a first group of encrypted data packets by encrypting some of the data packets based upon a first set of encrypted/decrypted values, wherein the number of encrypted data packets in the first group of encrypted data packets is less than the number of data packets formed at the source device, Col. 3, lines 47-49)

- using the second set of encryption/decryption values included in the second control data packet to decrypt the second group of encrypted data packets (Col. 6, lines 24 – 35 & Col. 6, lines 49 – 55 & Col. 7, lines 33 – 37, the examiner notes that their are multiple encryption and decryption keys used to encrypt/decrypt the variable length data packets that form the image of the video and audio signal that is sent to the sink device)

Huuhtanen does not appear explicitly disclose Vsync, Hsync , CNTL3 which are all control or timing signals that can be used in, communicating data over a communications link and the encryption and decryption of data packets according to HDCP (encryption/decryption engine).

However, Pasqualino teaches Vsync, Hsync , CNTL3 which are all control or timing signals that can be used in, communicating data over a communications link and the encryption and decryption of data packets according to HDCP (encryption/decryption engine), Paragraphs: 82, 93, 95, 97, 98, figure 2 & 3)

Huuhtanen and Pasqualino are analogous art because they are from the same field of endeavor of

encrypting and decrypting of data sent over an unprotected communication link between a source

and sink device.

At the time of the invention, it would have been obvious to one of ordinary skill in the art,

having the teachings of Huuhtanen and Pasqualino before him or her, to modify the forming of a

plurality of data packets at the source and selecting a some of the data packets to scramble of

Huuhtanen to include the control signals associated with the transmission of data packets of

Pasqualino, because by selecting only some of the plurality of data packets to be encrypted and

associating a specific control packet and encryption/decryption values will allow the receiver to

identify the incoming data packets that are encrypted and unencrypted. This protocol will also

make it very hard to obtain an illegal signal from the cable service operator, due to the fact that

each successive grouping of data packet has different encryption/decryption values and control

packet.

The suggestion/motivation for doing so would have been to prevent non-paying or non-

subscribing customers from obtaining or pirating free service (Pasqualino: Paragraph: 0053) and

preventing the pirating of all video and audio stream content or data packets being transferred

from a source (TV operators equipment) to a sink (customers cable TV box) in a lossless digital

domain. (Pasqualino: Paragraph: 49).

Therefore it would have been obvious to combine Huuhtanen and Pasqualino to obtain the

invention as specified in the instant claims.

Claim(s) 5 & 10 & 11 &16 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Huuhtanen (Publication # EP 0 674 441 A1) in view of Pasqualino (Publication #2002/0163598

A1)

Huuhtanen teaches forming a second group of encrypted data packets by encrypting some of the

data packets based upon a second set of encrypted/decrypted values, wherein the number of

encrypted data packets in the second group of encrypted data packets is less than the number of

data packets formed at the source device, Col. 3, lines 47-49).

Huuhtanen does not appear to teach Vsync, Hsync , CNTL3 which are all control or timing

values/signals that can be used in, communicating data over a communications link and the

encryption and decryption of data packets according to HDCP (encryption/decryption engine)

However, Pasqualino teaches Vsync, Hsync , CNTL3 which are all control or timing

values/signals that can be used in, communicating data over a communications link and the

encryption and decryption of data packets according to HDCP (encryption/decryption engine),

Paragraphs: 82, 93, 95, 97, 98, figure 2 & 3)

Huuhtanen and Pasqualino are analogous art because they are from the same field of endeavor of

encrypting and decrypting of data sent over an unprotected communication link between a source

and sink device.

At the time of the invention, it would have been obvious to one of ordinary skill in the art,

having the teachings of Huuhtanen and Pasqualino before him or her, to modify the forming of a

plurality of data packets at the source and selecting a some of the data packets to scramble of

Huuhtanen to include the control values/signals (CNTL3) associated with the transmission of

data packets (i.e. identify which data packets are encrypted) of Pasqualino, because by selecting

only some of the plurality of data packets to be encrypted and associating a specific control

packet and encryption/decryption values will allow the receiver to identify the incoming data

packets that are encrypted and unencrypted. This protocol will also make it very hard to obtain

an illegal signal from the cable service operator, due to the fact that each successive grouping of

data packet has different encryption/decryption values and control packet.

The suggestion/motivation for doing so would have been to prevent non-paying or non-

subscribing customers from obtaining or pirating free service (Pasqualino: Paragraph: 0053) and

preventing the pirating of all video and audio stream content or data packets being transferred

from a source (TV operators equipment) to a sink (customers cable TV box) in a lossless digital

domain. (Pasqualino: Paragraph: 49).

Therefore it would have been obvious to combine Huuhtanen and Pasqualino to obtain the

invention as specified in the instant claims.

Claim(s) 19 is rejected under 35 U.S.C. 103(a) as being unpatentable Huuhtanen (Publication #

EP 0 674 441 A1) over in view of Pasqualino: (Pgub # 2002/0163598 A1)

Huuhtanen teaches

- forming a second control data packet having encryption/decryption control signals

  associated with the second group of encryption values (Col. 6, lines 24 – 35 & Col. 6,

  lines 49 – 55 & Col. 7, lines 33 – 37, the examiner notes that their are multiple

  encryption and decryption keys used to encrypt/decrypt the variable length data packets

  that form the image of the video and audio signal that is sent to the sink device); and

- using the second control data packet to identify the second group of encrypted data

  packets (Col. 6, lines 24 – 35 & Col. 6, lines 49 – 55 & Col. 7, lines 33 – 37, the

  examiner notes that the multiple encryption / decryption keys are used to identify a

  second and any subsequent selection of data packets that are to be encrypted and

  decrypted at the sink device).

Huuhtanen does not appear to teach Vsync, Hsync , CNTL3 which are all control or timing

signals that can be used in, communicating data over a communications link and the encryption

and decryption of data packets according to HDCP (encryption/decryption engine)

However, Pasqualino teaches Vsync, Hsync , CNTL3 which are all control or timing signals that

can be used in, communicating data over a communications link and the encryption and

decryption of data packets according to HDCP (encryption/decryption engine), Paragraphs: 82,

93, 95, 97, 98, figure 2 & 3)

Huuhtanen and Pasqualino are analogous art because they are from the same field of endeavor of

encrypting and decrypting of data sent over an unprotected communication link between a source

and sink device.

At the time of the invention, it would have been obvious to one of ordinary skill in the art,

having the teachings of Huuhtanen and Pasqualino before him or her, to modify the forming of a

plurality of data packets at the source and selecting a some of the data packets to scramble of

Huuhtanen to include the control signals (CNTL3, VSYNC, HSYNC) associated with the

transmission of data packets (i.e. identify which data packets are encrypted) of Pasqualino,

because by selecting only some of the plurality of data packets to be encrypted and associating a

specific control packet and encryption/decryption values will allow the receiver to identify the

incoming data packets that are encrypted and unencrypted. This protocol will also make it very

hard to obtain an illegal signal from the cable service operator, due to the fact that each

successive grouping of data packet has different encryption/decryption values and control packet.

The suggestion/motivation for doing so would have been to prevent non-paying or non-

subscribing customers from obtaining or pirating free service (Pasqualino: Paragraph: 0053) and

preventing the pirating of all video and audio stream content or data packets being transferred

from a source (TV operators equipment) to a sink (customers cable TV box) in a lossless digital

domain. (Pasqualino: Paragraph: 49).

Therefore it would have been obvious to combine Huuhtanen and Pasqualino to obtain the

invention as specified in the instant claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dant B. Shaifer - Harriman whose telephone number is

571-272-7910. The examiner can normally be reached on Monday - Thursday: 8:00am

- 5:30pm Alt.Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.
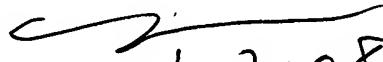
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12/ 28/ 2007

D.S.H.

NASSER MOAZZAMI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100